

SYNTAX

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CHANGES AHEAD FOR SYNCWARE NEWS

Fred Nachbaur's publication will continue on to volume 2, but shift locations, upgrade its format, take on additional personnel, publish quarterly instead of bi-monthly, and keep its editorial policies. Inquire of Syncware.

\$100 FOR YOUR ZX/TS; UP TO \$330 FOR MEMOTECH

Memotech will buy back your Memotech Timex-Sinclair add-ons at 50% of current suggested retail value and even take your ZX/TS for \$100--all credited toward your purchase of your MTX or FDX system. This offer is made only by Memotech Direct Sales Division. The trade-in values are:

16K	\$20	Keyboard	\$40
32K	\$40	Memotext	\$20
64K	\$60	Memocalc	\$20
RS232	\$40	HRG	\$40
Cent	\$30	Z80 Assembler	\$20

You may trade-in 1 Timex or Sinclair computer **with manual** for \$100 purchase credit. This **offer expires 30 June 1984.**

We will not be covering Memotech's line of computers in SYNTAX--but this is one thing you can do with your ZX/TS. For additional information call the marketing department at 617/449-6614 and tell them SYNTAX sent you.

UK SOURCE FOR SPECTRUM MANUALS AND PARTS

Bob Dyl of the Ocean State Users Group in RI tells us that you can get manuals and repair parts for the ZX Spectrum from:

Computers of Wigmore St.
87 Wigmore St.

London W1H 9SA Tel. 01-486-0373

Bob also reports that some Sears surplus stores sell 2068 software for \$9.95.

OVER 130 VENDORS CONTINUE TO SERVE ZX/TS AND 2068 OWNERS IN THE US. THIS IS IN ADDITION TO THE MORE THAN 100 BOOKS LISTED LAST ISSUE

VENDOR REPORT

Biocal Software has moved to 167 Wilson St., Petaluma, CA 94952. They have a lot of software for the TS1000 and will begin developing for the TS2068. They have a tape, called "Display" (\$10), that shows off the color graphics and sound capabilities of the TS2068 and includes over twenty different PLOT routines.

Howard W. Sams book Timex Sinclair 2068 Intermediate/Advanced Guide is on hold until Jul.84.

Knighted Computers (707 Highland St., Fulton, NY 13069 315/593-8219) carries Panasonic and Faxam monitors, AERCO disc and printer interfaces, and Textwriter 2000+ (80 col. word processor for TS2068).

ZX/TS USERS' GROUPS

To check for a local group that's not listed, or to announce a new group, call 617/456-3661 or write SYNTAX, RD 2 Box 457, Bolton Rd., Harvard, MA 01451. Send SASE for name of group in your area.

Jacksonville, FL: New group forming, contact Andrew Y. Lin, 2815 Cortez Rd., Jacksonville, FL 32216, 904/642-0430.

NEW PRODUCTS AND SERVICES

Z-Extender Version 1.4 consists of 13 graphics and programming utilities for the ZX/TS, allowing fill screen, border, reverse screen, store/recall screen, 24 line screen, 24 line COPY, free bytes, renumber BASIC lines, and autoSTOP (to overcome autorun programs). \$5.95 from Len Harmon, 4909 Clearlake Dr., Metairie, LA 70002.

BBS Directory (POB 4150, Beach Station, Vero Beach, FL 32964 305/466-5515) offers a quarterly listing of over 700 computerized bulletin board systems, including comments on program downloading, purpose of each bulletin board, etc. \$5.95 ppd. each quarter.

Textwriter 2000+, a TS2068 word processor using the AERCO Centronics I/F and Epson compatible printers (can be modified for other printers) includes full edit and text reformatting features, word wrap, condense, print margin control, page numbering, header, flexible enhancements. \$24.95 on cassette from Bob Fingerle, 39639 Embarcadero, Fremont, CA 94538.

International Software Database Corp. brings you .MENU, the world's first and largest database of detailed information about the availability of computer software. ISD publishes the information three different ways: two printed volumes (minicomputer and microcomputer), a toll-free phone number (1-800-THE-MENU), and through DIALOG Information Retrieval Service (file 232) or The Knowledge Index (database COMP2), 3460 Hillview Ave., Palo Alto, CA 94304 800/227-5510, 415/858-3796. For more information, about .MENU, call 303/482-5000 or write ISD, 1520 South College, Fort Collins, CO 80524.

Andre Baune (304 Scott, Chateaugay, Quebec, J6J 4H5, CANADA, 514/691-6933) presents 5 Arcade Games for 1K ZX/TS (Laser, Goalie, UFO, Le Vorace, and Bomb), and Artist/Turtle (graphics/CAI) for 2K RAM. French version available.

Lab Program 2068 calculates Biochemical Oxygen Demand, Chemical Oxygen Demand, Mixed Liquor Suspended Solids, Mixed Liquor Volatile Suspended Solids, Total Suspended Solids, Total Solids, and correlation factors. User friendly program allows data tabulation and is ZX/TS printer compatible. Full documentation to follow. \$24.95 on cassette from John Kuhn, 1707 King St., Jacksonville, FL 32204 904/384-8054.

T.E.J. Computer Products (859 N. Virgil Ave., Los Angeles, CA 90029 213/665-5111) announces the Anchor Telecommunications Modem (works with ZX/TS and TS2068 machines). Comes with Smart Terminal I cassette; Smart Terminal II cartridge optional.

In War in the East (Invasion of Russia, Jul.41) you try to take control of Moscow while dealing with combat, weather, and supply lines (for ZX/TS 16K, \$14.95 + \$2 P&H; for 32K ZX/TS or TS2068, \$17.95 + \$2 P&H). Fall of the Third Reich (Dec. 44 to Apr.45) plays a similar but more involved game in a different context (for TS2068, \$17.95 + \$2 P&H). Both available from Sharp's, 127 Nine Mile Rd., Sandston, VA 23150 804/737-4895 MC/VISA.

RAM Products, 4736 N. Milwaukee Ave., Chicago, IL 60630 announces the Solid State Disk Drive, a ZX/TS peripheral kit which stores 8K in EPROM (includes EPROM burner). Can be used to copy, read, program, or verify EPROMs. \$99.95 kit + \$2 P&H, \$5 P&H foreign.

GRAPHIC POINTER--TS2068

Use this machine code routine to quickly specify a PLOT position on the normal 2068 screen. The machine code is entirely relocatable and may be loaded into any safe area of memory.

In the sample program, the routine begins at 65000. When line 15 executes, the machine code takes over and you position a flashing pixel with the joystick. When you press the joystick fire button, the machine code routine returns to BASIC. The value returned (and stored in P) equals Y*256+X, where X and Y represent PLOT coordinates. Lines 25 and 30 convert P back into X and Y. The machine code also sets the system variable COORDS, the last PLOT position.

Line 10 turns on OVER writing: in this mode, PLOTS will set a point if it is reset, or reset it if it is set (also called XOR writing). The machine code routine always PLOTS each point twice, so it will leave the display intact and still flash visibly. If you call the machine code with OVER set to 0, it will leave a line behind as you move the joystick.

This routine includes two 65535 iteration delay loops, so the dot won't move around the screen too fast. You can see the loop constants as double 255's in the DATA statement.

If you set BRIGHT, FLASH, INVERSE, PAPER color, or INK color prior to calling the machine code, each character position you pass through will have its attribute byte set accordingly.

This program runs only on TS2068s, because it uses joystick hardware and ROM calls for plotting points. We welcome modifications for Spectrums or mice.

```
1 CLEAR 65000
2 FOR a=65000 TO 65083
3 READ d
4 POKE a,d
5 NEXT a
10 OVER 1
15 LET P=USR 65000
20 OVER 0
25 LET Y=INT (P/256)
30 LET X=P-Y*255
40 PRINT AT 0,0;X,Y
50 GO TO 10
100 DATA 001,255,255,016,054,
237,075,125,032,082,014,211,045,
062,001,219,245,087,203,079,030,
007,120,254,000,040,001,008,120,
203,071,032,007,120,254,175,040,
001,004,122,203,087,032,007,121,
254,000,040,001,013,122,203,099,
032,007,121,254,255,040,001,010,
122,245,197,205,062,030,001,255,
255,016,254,193,197,205,062,030,
193,241,203,127,200,024,172,
SYNTACTIC SUM: 37316, TS2068
```

TS2068 DEVICE INDEPENDENT INPUT/OUTPUT

Your TS2068's ROM operating system contains routines to assign input and output to different physical devices without changing the program taking the input and generating the output. This is called device-independent input/output.

When you turn on your 2068, it sets the output according to the following:

Command	Outputs to	Stream	Device
LPRINT	Printer	3	"P"
LLIST	Printer	3	"P"
COPY	Printer	3	"P"
PRINT	Screen Top	2	"S"
LIST	Screen Top	2	"S"
INPUT	Screen Bottom	1	"K"

You can assign any physical device ("K", "S", or "P") to any stream number (0-255). So if you want PRINT to output to the printer instead of the screen, you use:

```
OPEN #2,"P"
```

This says to take all the output going to stream 2 and give it to the printer. LIST output will go to the printer too, since it goes to stream 2.

Suppose you want to be able to choose between screen output and printer output every time you RUN the program. You could write your program to output to the screen all the time, and if you have a printer insert OPEN #2,"P"; or you could write for the printer and if you don't want to use it insert OPEN #3,"S".

If you want to be neater, you could pick a new stream number (say 4), and write your program with PRINTs where you always want to output to the screen, and LPRINTs where you always want the printer, and PRINT #4 when you want a choice. Then you either OPEN #4,"P" or OPEN #4,"S". The #4 is just another PRINT modifier, so you end it with a semicolon:

```
PRINT #4;"Hello",A
```

One last command, CLOSE #, will help you get things back to normal. CLOSE #1 resets stream 1 to the initial setting (Screen Bottom). CLOSE #2 and #3 do the same. CLOSE #4 (or any other user-defined stream) will just make PRINT # to that stream number invalid.

Warning: some operations ignore the settings of the streams. COPY will always output to the printer, LOAD will always display the file names on the Screen Top. INPUT works only with Screen Bottom.

BOOK REVIEWS: THREE HOW-TOS

Title: How To Market Your Timex/Sinclair Software
 Author: R.A. Favro
 Pages: 52 Softcover
 From: Softmark Associates
 191 Munro Ave.
 Toronto, Ontario
 Canada M4M 2B8
 416/465-7791

Price: \$14.95
 Title: 1984 Programmer's Market
 Editor: Brad M. McGehee
 Pages: 268 Softcover
 From: Writer's Digest Books
 9933 Alliance Rd.
 Cincinnati, OH 45242
 513/984-0717

Price: \$16.95
 Title: 1983 Software Writer's Market

Editor: Christine Leu
 Pages: 98 Softcover
 From: Kern Publications
 190 Duck Hill Rd.
 Duxbury, MA 02332
 617/934-0445
 Price: \$28.50

If you've considered turning your programming efforts into a little cash, three books purport to tell you how. Of the three, one seems better for self-marketers, one better for selling to software publishers, and one really doesn't hit the mark on either count.

How to Market Your Timex/Sinclair Software delivers more professional advice than its poorly reproduced typewritten appearance would indicate. It addresses itself primarily to programmers who prefer to market their own work. Starting with an overview of the size and composition of the TS market, HMYTSS covers developing your product, developing your market plan and choosing a software publisher. The last four chapters deal with running a mail-order business, direct mail marketing, advertising and other marketing opportunities.

Although HMYTSS can help you

promote your product to software publishers (it lists 11), its strength definitely lies in its do-it-yourself approach. It also gives many references to other sources.

Put out by the same people who give us Writer's and Photographer's Market, 1984 Programmer's Market contains much the same kind of information as the other Market books. It starts with a chapter on the submission process, copyrights, royalties, and other business. Then it discusses writing manuals and documentation, designing easy-to-use software and writing the successful game. The remainder of the book (248 pages) lists software, book and periodical publishers in the microcomputer field, including 28 software publishers specifically mentioning TS computers. Unlike HMYTSS, this book gives information for all machines. Listings include name and address, contact, what kind of programs they need and payment arrangements.

Based on much the same idea, 1983 Software Writer's Market gives you lists of micro manufacturers plus software, book and periodical publishers. It also lists computer shows, distributors and directories. This book contains no helpful hint information (in fairness note that Kern Publications offers a book entitled Freelance Software Marketing, not reviewed here) and deals with a wide range of micros. I presume Kern will update it yearly. I found two software publishers mentioning TS software specifically and six book publishers. Many listed no specific machine.

If you plan to market your own software, How to Market Your Timex/Sinclair Software will benefit you most of the three books. If you prefer to deal with a software publisher, check out the second two. I found Programmer's Market more substantial and recommend it of the two listings-type books.

Ann L. Zevnik, Allston, MA

DEAR EDITOR:

Some person on your staff is well acquainted with the technical aspects of computers, but is totally incapable of teaching others what he knows; his writing is obscure; he fails to give examples which would enable the tyro to make sense out of what he is saying. These remarks apply aptly to recent articles on addressing and keyboard scanning, to mention just two. A suggestion: show the article to a tyro before publication; his questions will serve as a guide to fuller and simpler explanations.

A Reader, Clifton Park, NY

Syntax opted, at its founding, to serve a continuing audience. Novices rapidly progress to more knowing states. Much of what goes in Syntax builds on previously published material (our collected back issues are available as The Works II--see our order blank on page 11). Tyros should also use books and users' groups to learn fundamentals. Syntax does take care to present programs in recipe form--you need not understand, you may simply use. But when you reach understanding, Syntax wants you to see value still.

The Timex pullout was a disappointment, but one I felt I could live with. What I see as the real threat to ZX/TS computing is the alarming number of panic stricken third party software and hardware producers leaving the Timex scene.

This wholesale desertion perplexes me because, contrary to what those leaving the industry may say about the ZX/TS market being dead, I have been inundated with calls and letters from people who say, "Please don't give up on ZX/TS computers."

A healthy market is there for people who offer quality, honesty and fair prices. I would encourage those in the business to stick with their Timex line. Opportunity still knocks for anyone who wants to get started and is willing to see their project through.

If the ZX/TS computer does eventually fade away, it will not be because Timex quit. The real reason, rather, will be that there isn't any software or hardware available for it. Users will simply lose interest. To keep the machine alive, we must all pull together and communicate. SYNTAX offers a rare opportunity to coordinate this.

Thomas B. Woods, Jefferson, NH

I tried "Recipes for Advanced Video" [SYNTAX Feb.84], and I got 64 columns, but could only use every other one. Printer output did not change. Why?

John Kuhn, Jacksonville, FL

Although the TS2068 hardware can display 64 columns per line, none of the software included in the BASIC ROM takes advantage of this feature. When in 64 column mode, every other character in a line comes from DFILE2 (BASIC always uses DFILE1). The TS2040 and ZX Printers cannot COPY the 64 column display because they cannot print 512 dots per line.

Supelco sells thermal paper for the HP 3390 Integrator, the same paper used with TS2040 printers except in 400 foot rolls. I have used both the black and blue, and both work very well. I like the blue because the paper is whiter. [Supelco, Inc., 3110 Forest Oaks Dr. Suite 250, Houston, TX 77017 713/947-8640, Cat. number 2-2337 (blue); 2-2355 (black)]

I also found gold PC board edge connector fingers that can be soldered to the fingers of the ZX/TS [Elfab Corp., POB 810555, Dallas, TX 75381 214/233-3033].

David Huebsch, Chesapeake, VA

Why do you print ZX/TS programs and say "Translate with FIRSTLOADER, then make these changes"? Why don't I just type them into my TS2068 with the changes?

Why did you put Syntactic Sum for the 2068 in the UDG memory? Why did you then CLEAR 65499, since the UDG area is already protected from NEW?

Why was the data in "Recipes for 2068 Advanced Video" [SYNTAX Feb.84] in hex, then translated?

James F. Brezina, Elmhurst IL

You can certainly enter TS1000 programs directly into your TS2068, with the published changes. Or you can translate.

We considered the UDG area one which was safely out of the way so that Syntactic Sums could be calculated for programs that fill all of memory. The CLEAR was a harmless oversight.

The source document for "Recipes" contained the code in hexadecimal. We opted to publish it in hex to avoid translation errors. The BASIC code which converts hex to decimal is useful in other ways and very compact, relying on the VAL function's ability to evaluate a variable.

XX/TS RELATED COMPANIES STILL ACTIVELY SUPPORTING TIMEX/SINCLAIR COMPUTERS

Organization	Address	State	Zip	Telephone
*A&J MicroDrive	1605 E Duane Ave Suite I, Sunnysvale	CA	94086	408/732-9292
A.F.R. Software	1605 Penn. Ave. # 204, Miami Beach	FL	33139	305/531-6464
*AERCO	POB 18093, Austin	TX	78760	512/331-0719
Aardvark 80	2352 S.Commerce, Walled Lake	MI	48088	313/669-3110
Apropos Technology	1071A Abenida Acaso, Camarillo	CA	93010	805/482-3604
*Audio Vision Systems	1279 N. Normandie, Los Angeles	CA	90027	213/660-5217
AudioGraph	3584 Leroy St., Ann Arbor	MI	48103	313/769-6859
BASICally Programming	2528 West Olive Dept S, Fullerton	CA	92633	714/738-0666
*Banta Software	8088 Highwood Way, Orangevale	CA	95662	916/722-4895
Barlog Software	401 N. Geyer Rd., Kirkwood	MO	63122	
Baune, Andre	304 Scott, Chateauguay	QU	J6J 4H5	514/691-6933
Biocal Software	167C Wilson St., Petaluma	CA	94952	
Bird Software	2091 Carrick St., Victoria	BC	V8R 2M5	
Brainchild Computer Works	POB 506, Pewaukee	WI	53072	414/691-3903
*Brown, E. Arthur Co.	3404 Pawnee Drive, Alexandria	MN	56308	612/762-8847
*Byte-Back Co.	Rt 3 Box 147 Brodie Rd, Leesville	SC	29070	803/532-5812
Cinagro Software	155 7th St., Rochester	NY	14609	716/654-7614
Compusa Corporation	1101 Bristol Rd., Mountanside	NJ	07092	201/654-7220
*Computer Continuum	301 16th Ave, San Francisco	CA	94118	415/752-6294
Computerware Publishing	92 Ruskin St., Ottawa	ON	K1Y 4B2	
*Crystal Coast Software	POB 233, Morehead City	NC	28557	
*Curry Computer	5344 W. Banff Lane, Glendale	AZ	85306	602/978-2902
*D. Lipinski Software	2737 Susquehanna Rd., Roslyn	PA	19001	215/572-6812
DHS	POB 681, Orland	CA	95963	916/865-5188
Delphic Enterprises	POB 72205, Corpus Christi	TX	78472	512/854-5873
Discount Software	POB 2035, New York	NY	10185	212/486-0980
Doc's Software	4339 Keysville Ave., Spring Hill	FL	33526	
Down East Computers	POB 3096, Greenville	NC	27834	919/752-7817
*E-Z Key	Suite 75, 711 S. Artery, Quincy	MA	02169	617/773-1187
ENER-Z Company	POB 635, Fort Washington	PA	19034	215/757-0284
*EZRA Group II	POB 5222, San Diego	CA	92105	
*Executive Workshop	7420 SF Woodstock, Portland	OR	97206	503/771-8564
*Fingerle, Robert	39639 Embarcadero, Fremont	CA	94538	
*G. Russell Electronics	RD 1 Box 539-S, Centre Hall	PA	16828	814/364-1325
*Games to Learn By	2 South St Box 575, Williamsburg	MA	01096	413/268-7505
Ganhart Earthings	115 N. Racky River Dr., Berea	OH	44017	
General Systems	2312 Rolling Rock Dr., Conley	GA	30027	404/243-7369
Consulting				
*Gesang Associates	POB 452, Randallstown	MD	21133	301/922-0767
Geschwind, Herman	1714 Clarendon Dr., Greensboro	NC	27410	
Gibson Data Systems	9 Orchard Dr., Durham	NH	03824	
Gladstone Electronics	90 Furhmann Blvd., Buffalo	NY	14203	716/874-5510
*Group Technology Ltd.	POB 87, Check	VA	24072	703/651-3153
Harmon, Len	4909 Clearlake Dr., Metairie	LA	70002	
Hawg Wild Software	POB 7668, Little Rock	AR	72217	501/227-7817
*Heath Computer Serv.	950 East 52 South, Greentown	IN	46936	317/628-3130
*Heller Paper Co.	2123 E. 38th St., Brooklyn	NY	11234	
Hobby Robot Co.	POB 887, Hazlehurst	GA	31539	912/375-7821
Hunter	1630 Forest Hills Dr., Okemos	MI	48864	
Huron Valley Research	POB 732, Highland	MI	48031	
Independence Research	POB 1497, Orem	UT	84057	
Integrated Data Systems	11 Brighton Ave, Toronto	ON	M4M 1P3	
JK Audio	POB 3295, Escondido	CA	92025	619/741-5132
*JM Software	1852 Appleford St., Gloucester	ON	K1J 6T4	613/746-7869
*JRC Software	POB 448, Scottsburg	IN	47170	812/752-6071
*K-Soft	845 Wellner, Naperville	IL	60540	312/961-1250
K2 Electronic Design	3990 Varsity Drive, Ann Arbor	MI	48104	313/973-6266
Kimbrough, B. F.	723 Roselle Ave. Floor 2, Akron	OH	44307	
*Knighted Computers	707 Highland St., Fulton	NY	13069	315/593-8219

Konder, Arnold	2 Jane St., New York	NY	10014	
*Kuhn, John	1707 King St., Jacksonville	FL	32204	904/384-8054
*Lake, Virginia T.	POB 351, Hockessin	DE	19707	
Luxtron Inc	241 Winter St, Haverhill	MA	01830	617/372-5211
*Magic World Software	POB 1184, Olympia	WA	98507	
*Maryland Book Exchange	4500 College Ave., College Park	MD	20740	301/927-2510
Mech. Design Analysis	1235 Madera St., Dubuque	IA	52001	319/556-2133
Cons.				
Microsync Services	162R Marlboro St, Keene	NH	03431	
Mill Research	32749 Avalon Crescent, Abbotsford	BC	V2T 3W9	
Monixware	PO Box 318, NFLD	NJ	07435	
Orange Coast Software	POB 951, Midway City	CA	92655	
Corp				
People's Computer	2S 700 Cerny, Warrenville	IL	60555	312/393-1507
*Pheonix Enterprises	1780 N. Dupont Hwy No. 17, Dover	DE	19901	302/734-0179
*Pyramid Electronics	2174 Gulf Gate Dr., Sarasota	FL	33581	813/922-9574
Quicksilva	426 West Nakoma, San Antonio	TX	78216	512/340-3684
RAM Products	4736 N. Wilwaukee Ave., Chicago	IL	60630	
*RIST Computers	POB 499 Ft Hamilton Sta, Brooklyn	NY	11209	212/259-4934
ROMpak	8206 Blackburn Ave, Los Angeles	CA	90048	
*Ramex International	48945 Van Dyke, Utica	MI	48087	313/463-1795
Robotec	59 C St Ampoint Ind Park, Perrysburg	OH	43551	419/666-2410
*S & S Company	388 W. Lake St., Addison	IL	60101	312/628-8955
Second Base	700 Lexington Ave, Altoona	PA	16601	814/942-1871
Seymour, Paul F., P.E.	POB 11, Hamburg	NJ	07419	201/827-9151
*Sharp's	127 Nine Mile Rd., Sandston	VA	23150	804/737-4895
Sidorski, Edward	POB 842, Susquehanna	PA	18847	
Simulusion	POB 2382, La Jolla	CA	92038	619/454-1023
Sinclair Research	50 Staniford St., Boston	MA	02114	617/742-4826
*Sinware	POB 8032, Santa Fe	NM	87504	505/988-2096
Siriusware	6 Turning Mill Rd., Lexington	MA	02173	
Skinner Electronic Ent.	POB 787, Fallbrook	CA	92028	619/728-6904
*SmallTyme Software	519 Independence Ave. SE, Washington	DC	20003	202/543-5891
Smith, Kendric	927 Mears Ct., Stanford	CA	94305	
*Soft-Way	3308 Midway Dr. #124, San Diego	CA	92110	
*Softsync	14 E. 34th St, New York	NY	10016	212/685-2080
Software Solutions	927 Mears Ct., Stanford	CA	94305	415/493-7210
Speedware	POB 19138, Austin	TX	78760	512/447-8087
Starburst Software	2214 Horine Rd., Festus	MO	63028	
Stock Market Software	1556 Halford Ave. #236, Santa Clara	CA	95051	
*Story Software	3838 S 97th St, Milwaukee	WI	53228	
*Stueber, Mark	127 9-Mile Rd., Sandston	VA	23150	804/737-4895
*Sunset Electronics	2254 Taraval, San Francisco	CA	94116	415/665-8330
SyncWare	POB 5177, El Monte	CA	91734	213/448-4113
TAG Software	POB 688, Naugatuck	CT	06770	
*TEJ Computer Products	859 N. Virgil Ave., Los Angeles	CA	90029	213/665-5111
*TS Training Info Serv.	POB 15214, Red Bank	TN	37415	615/877-6328
Tidwell, Vernon	1303 Whitehead St., Key West	FL	33040	305/296-8657
Timensa Software	3707 Downey Dale Dr., Randallstown	MD	21133	301/655-6195
UAS	POB 612, Haddenfield	NJ	08033	609/667-0031
Val Corporation	1621 N. Wakefield St., Arlington	VA	22207	703/243-0545
Wasserman, Harvey	4604 Apple Tree Dr., Alexandria	VA	22310	703/971-7593
*White Lightning	Rte 4 Box 2240, Lufkin	TX	75901	409/632-3757
White, Al	308 18 1/2 Ave. SW, Rochester	MN	55902	507/282-2416
Wizard Works	POB 65, Walkerville	MI	49459	
*Woods, Tom	POB 64, Jefferson	NH	03583	
York 10 Computerware	9525 Vassar Ave, Chatsworth	CA	91311	213/710-1430
ZX-Panding, Ltd.	POB 25, Newton	NC	28658	704/464-2742
*Zebra Systems Inc.	78-06 Jamaica Ave, Woodhaven	NY	11421	212/296-2385
*Indicates a company that provides support for the TS2068				

SOFTWARE REVIEW

Program: CHECK-B
Machines: TS2068
Form: Cassette
Listing: No
Listable: Yes
Language: BASIC
Display: Good
Author: Dale Lipinski
From: D. Lipinski Software
2737 Susquehanna Road
Roslyn, PA 19001
215/572-6812
Price: \$20

CHECK-B, a menu-driven package intended to help you keep your checkbook in order, consists of several functions. You can enter data into your electronic checkbook, including check number, payee, amount, and an optional memo, look for a particular transaction, display or print all of the entries, locate and change any entry, balance (reconcile) your checkbook, delete reconciled entries, and SAVE program and data.

CHECK-B contains many good features, among them ease of use, complete, understandable documentation, input error checking and crash recovery. You can enter transactions in any order. After reconciliation, CHECK-B reports correct balances for your checkbook and your bank statement.

CHECK-B has some drawbacks, too. It beeps too much and is too verbose (I prefer output like my checkbook register to CHECK-B's ten lines per transaction). It displays the current balance after each transaction, instead of a more useful running balance, and finds partial names during a search only if they match the first letters in the field. CHECK-B uses its own "quit" key to mean "go ahead and delete entries" in one section. Not very clever human engineering.

Overall, I cannot recommend this package unless you intend to modify it to make it more useful.

SOFTWARE REVIEW

Program: DeathChase
Machines: TS2068
Form: Cassette
RAM Req: 48K
Listing: No
Listable: No
Language: MC
Display: Excellent
Author: Mervyn J. Estcourt
From: Games to Learn By
POB 575
Williamsburg, MA 01096
413/268-7505
Price: \$19.95

Even if you don't believe it's 2501 and you belong to a group of mercenary motorcyclists, DeathChase ought to keep you occupied forever trying to reach the elusive Sector 8. According to the instructions, there lies a great reward beyond the miles of day and night motorcycle patrols through the woods. I have yet to reach it.

In Cyclepath, you ride through the woods in 3D, slowly approach enemy motorcyclists and destroy them with photon bolts. When you've managed to clear out a sector, night falls and the scenario repeats. It's quite difficult just to avoid hitting the trees, never mind shooting your enemies (or special bonus helicopters and tanks). Realistic sounds accompany all your travels, although a bit loud for my taste.

This program originally ran on the ZX Spectrum and has been modified for the TS2068. It appears to be bug-free, LOADED easily, and displays some of the nicest graphics I've ever seen on any small microcomputer. It uses the keyboard or the left hand joystick for steering and firing.

If all programs were this well written, computing would be a lot more fun and a lot less work. If arcade-style graphics makes your day, you can count on this game for hours of challenging play.

VIDEOGRAPH--TS2068

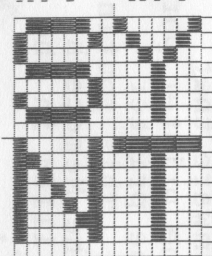
You can create up to 4 user defined graphics characters at a time, using a 16 X 16 grid provided by VIDEOGRAPH. All 21 UDGs can be defined, but assigning a character to UDG "U" may distort the display, since the program uses this character to print the grid.

Move the cursor with the 4 arrow keys (unshifted). Blacken a pixel with the 1 key; erase a pixel with 0. When you want to define one or more UDGs from the grid, hit 9. The program will prompt you to assign each quarter of the grid to a letter: if you don't want to assign a certain quarter of the grid, just hit ENTER. It takes about 10 seconds to store a UDG.

In the program listing, line 8030 contains 8 graphic U's, line 8130 contains only one graphic U (the last U on the line), and line 8530 contains two graphic U's.

J. Showalter, Akron, OH

VIDEOGRAPH



```
8000 REM VIDEOGRAPH © 1984
8002 REM by J. Showalter
8004 REM 0360 - 8000: UDG
8006 REM 0360 - 8000: UDG
8010 LET L=4: LET C=1: LET X$=""
8020 FOR n=0 TO 7: READ a: POKE
USR "U"+n,a: NEXT n
8030 LET V$="UUUUUUUU": DIM Z$(3
2,8)
8040 FOR n=1 TO 32: LET Z$(n)=V$
: NEXT n
```

```
8100 CLS : REM Display
8110 FOR n=1 TO 17: PLOT 8-8*(n=
9),n+8:8: DRAW 128+16*(n=9),0: P
LOT n+8,8+8-8*(n=9): DRAW 0,128+
16*(n=9): NEXT n
8115 PRINT AT 0,0;" "
8120 PRINT AT 2,1:"UDG-1";TAB 10
:"UDG-3" :TAB 21,1:"UDG-2";TAB 1
0:"UDG-4"
8130 FOR n=7 TO 16: PRINT AT n,2
0:CHR$(n+58);"";CHR$(n+137);T
AB 28:CHR$(n+68);"";CHR$(n+14
7): NEXT n: PRINT AT 17,28;"U";
"";"U"
8135 REM CURSOR & controls
8140 LET r=(-3+16*(C>8)): LET b=c
-8*(C>8)
8150 PRINT AT L,C: OVER 1;">"
8160 PAUSE 0
8170 LET Y$=INKEY$: IF CODE Y$<4
8180 CODE Y$>57 THEN GO TO 8160
8190 GO TO (CODE Y$-47)*20+8500
8200 REM UDG-1
8230 LET Z$(r,b)="U": PRINT AT L
,C:"U": GO TO 8140
8240 REM UDG-2
8250 LET Z$(r,b)="": PRINT AT L
,C:"": GO TO 8140
8260 REM UDG-3 AND UDG-4
8270 GO TO 8160
8280 REM UDG-1 LEFT
8290 PRINT AT L,C:Z$(r,b): LET C
=c-1+16*(C=1): GO TO 8140
8300 REM UDG-3 DOWN
8310 PRINT AT L,C:Z$(r,b): LET L
=L+1+16*(L=19): GO TO 8140
8320 REM UDG-4 UP
8330 PRINT AT L,C:Z$(r,b): LET L
=L-1+16*(L=4): GO TO 8140
8340 REM UDG-2 RIGHT
8350 PRINT AT L,C:Z$(r,b): LET C
=c+1+16*(C=16): GO TO 8140
8360 REM Define User Graphics
8370 LET V=0: FOR n=1 TO 4
8380 INPUT FLASH 1:"UDG-";CHR$(
n+48): FLASH 0:"(character A to
U)":X$(n): IF X$(n)="9" THEN GO
TO 8120
8390 IF X$(n)=" " THEN LET V=NOT
V: NEXT n: GO TO 8370
8400 LET k=(CODE X$(n))-32*(CODE
X$(n)>96): IF k<63 OR k>85 THEN
LET V=NOT V: GO TO 8370
8410 PRINT AT 2+19*(V),8+9*(n>2)
:"":CHR$(k): LET V=NOT V: NEXT n
8420 PRINT AT 0,0: FLASH 1:"STAN
D-BY": FLASH 0:" GRAPHICS BEING
DEFINED"
8430 FOR n=1 TO 4: LET a=0: IF X
$(n)=" " THEN NEXT n: GO TO 8410
8440 FOR y=1+8*(n-1) TO 8+8*(n-1
): LET d=0: LET p=7: FOR x=1 TO
8
8450 LET d=d+2*(p)*(CODE X$(y,x)
=143): LET p=p-1: NEXT x
8460 POKE USR X$(n)+a,d: LET a=a
+1: NEXT y
8470 BEEP .1: BEEP .1: BEEP
.05: BEEP .1: GO TO 8115
8480 SAVE "VIDEOGRAPH" LINE 843
8490 REM "VIDEOGRAPH" FOR TS
8500 DATA 128,128,128,128,128,12
8,128,128
SYNTAXIO SUM: 1279 TS2068
```

DIRECT CHARACTER CODE OUTPUT--8K/1K

Since the ZX/TS machines do not use ASCII internally, printer interfaces must translate ZX/TS character codes into ASCII before sending them to the printer. The ASCII code runs from 0 to 127, and uses the eighth bit of each byte for parity. Some printers, however, use the ASCII code from 0-127 and an extension to ASCII from 128-255. Some interfaces filter out certain codes (less than 32 or over 128). If you need to send codes to your printer that your interface won't allow, use this.

We need only find the routine in the interface firmware that actually accesses the printer port, and send codes to the printer without translation. This routine starts at 10549 in the Memotech Centronics I/F, and 11104 in the AERCO Centronics I/F.

Type in listing one and RUN. Enter the following numbers, depending on the interface you use:

```
Memotech: 62 65 205 53 41 201
AERCO:    62 65 205 96 43 201
```

Now if you POKE 16515 with the ASCII code you want to print and then execute RAND USR 16514, the printer will be sent the code in location 16515.

```
10 REM 123456
20 FOR A=16514 TO 16519
30 INPUT D
40 POKE A,D
50 NEXT A
SYNTACTIC SUM: 3511, 8K ROM
```

Virginia T. Lake, Wilmington, DE

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